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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Presley Hays et al. Art Unit: 2625
Serial No.: 10/728,698 Examiner: Unknown
Filed : December 5, 2003
Title : AUTOMATED METHOD FOR IMAGE ANALYSIS OF RESIDUAL
 PROTEIN

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Applicants call attention to the attached Information Disclosure Statement and documents listed on form PTO-1449.

This filing is being made before the receipt of a first Office action on the merits. No fee is required.

The documents are in the English language; hence no concise explanation is necessary per Rule 98(a)(3).

Copies of the US patents are not being provided per the waiver posted on the PTO website.

Consideration of the foregoing and enclosures plus the return of a copy of the enclosed form PTO-1449 with the

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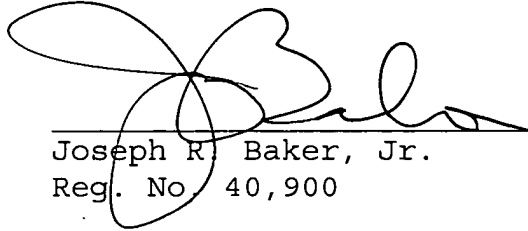
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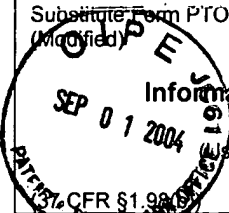
Respectfully submitted,



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Substitute Form PTO-1449 (Modified)  Information Disclosure Statement by Applicant (Use several sheets if necessary)	U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 10225-003003	Application No. 10/728,698
	Applicant Presley Hays et al.			
	Filing Date December 5, 2003		Group Art Unit 2625	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	3,824,393	07/16/1974	Alfred E. Brain			
	AB	3,851,972	12/03/1974	Smith et al.			
	AC	4,011,004	03/08/1977	Levine et al.			
	AD	4,196,265	07/01/1980	Koprowski et al.			
	AE	4,249,825	02/1981	Shapiro			
	AF	4,342,905	08/03/1982	Fujii et al.			
	AG	4,393,466	07/1983	Deindoerfer et al.			
	AH	4,513,438	04/23/1985	Graham et al.			
	AI	4,612,614	09/1986	Deindoerfer et al.			
	AJ	4,656,594	04/07/1987	Ledley			
	AK	4,673,973	06/16/1987	Ledley			
	AL	4,700,298	10/13/1987	Palcic et al.			
	AM	4,741,043	04/1988	Bacus			
	AN	4,945,220	07/31/1990	Mallory et al.			
	AO	4,965,725	10/1990	Rutenberg			
	AP	4,991,223	02/05/1991	Bradley			
	AQ	5,003,165	03/26/1991	Sarfati et al.			
	AR	5,008,185	04/1991	Bacus			
	AS	5,018,209	05/1991	Bacus			
	AT	5,051,816	09/1991	Harrison et al.			
	AU	5,068,909	11/26/1991	Rutherford et al.			
	AV	5,085,325	02/04/1992	Jones et al.			
	AW	5,087,965	02/11/1992	Torre-Bueno			
	AX	5,123,055	06/1992	Kasdan			
	AY	5,202,931	04/13/1993	James W. Bacus			
	AZ	5,233,684	08/03/1993	Ulichney et al.			
	AAA	5,254,845	10/19/1993	Burgess et al.			

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	ABB	5,257,182	10/26/1993	Luck et al.			
	ACC	5,268,966	12/07/1993	Harvey L. Kasdan			
	ADD	5,287,272	02/15/1994	Rutenberg et al.			
	AEE	5,317,140	05/1994	Dunthorn			
	AFF	5,321,545	06/14/1994	Bisconte			
	AGG	5,333,207	07/26/1994	Mark R. Rutenberg			
	AHH	5,338,924	08/16/1994	Barrett et al.			
	AII	5,352,613	10/1994	Tafas et al.			
	AJJ	5,375,177	12/20/1994	Vaidanathan et al.			
	AKK	5,409,007	04/1995	Saunders et al.			
	ALL	5,432,871	07/11/1995	Dmitry A. Novik			
	AMM	5,449,622	09/12/1995	Yabe et al.			
	ANN	5,459,384	10/1995	Engelse et al.			
	AOO	5,463,470	10/31/1995	Terashita et al.			
	APP	5,469,353	11/21/1995	Pinsky et al.			
	AQQ	5,473,706	12/05/1995	Bacus et al.			
	ARR	5,481,401	01/02/1996	Kita et al.			
	ASS	5,499,097	03/12/1996	Ortyn et al.			
	ATT	5,515,172	05/07/1996	Shiau			
	AUU	5,526,258	06/11/1996	Bacus			
	AVV	5,533,628	07/09/1996	Tao			
	AWW	5,583,666	12/10/1996	Ellson et al.			
	AXX	5,585,469	12/17/1996	Kojima et al.			
	AYY	5,602,941	02/11/1997	Charles et al.			
	AZZ	5,625,705	04/29/1997	Joel M. Recht			
	AAAA	5,635,402	06/03/1997	Alfano et al.			
	ABBB	5,646,677	07/08/1997	William L. Reber			

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Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ACCC	5,647,025	07/08/1997	Frost et al.			
	ADDD	5,671,288	09/23/1997	Wilhelm et al.			
	AEEE	5,690,892	11/25/1997	Babler et al.			
	AFFF	5,691,779	11/25/1997	Yamashita et al.			
	AGGG	5,701,172	12/23/1997	Azzay			
	AHHH	5,706,093	01/06/1998	Yashuhiro Komiya			
	AIII	5,726,009	03/10/1998	Connors et al.			
	AJJJ	5,735,387	04/07/1998	Polaniec et al.			
	AKKK	5,740,267	04/14/1998	Echerer et al.			
	ALLL	5,740,270	04/14/1998	Rutenberg et al.			
	AMMM	5,783,814	07/21/1998	Fairley et al.			
	ANNN	5,799,105	08/25/1998	Yang Tao			
	AOOO	5,846,749	12/08/1998	Slamon et al.			
	APPP	5,851,186	12/22/1998	Wood et al.			
	AQQQ	5,854,851	12/29/1998	Bamberfer et al.			
	ARRR	5,867,598	02/02/1999	Ricardo L. de Queiroz			
	ASSS	5,877,161	03/02/1999	Riabowol			
	ATTT	5,880,473	03/09/1999	Ginestet, Jacques			
	AUUU	5,888,742	06/27/1999	Lal et al.			
	AVVV	5,889,881	03/30/1999	Macaulay et al.			
	AWWW	5,911,003	06/08/1999	Richard A. Sones			
	AXXX	5,911,327	06/15/1999	Tanaka et al.			
	AYYY	5,966,309	10/12/1999	O'Bryan et al.			
	AZZZ	5,966,465	10/12/1999	Keith et al.			
	AAAAA	6,006,191	12/21/1999	Andrew L. DiRienzo			
	ABBBB	6,007,996	12/28/1999	McNamara et al.			
	ACCCC	6,011,595	01/2000	Henderson et al.			

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	ADDDD	6,031,929	02/29/2000	Maitz et al.			
	AEEEE	6,058,322	05/02/2000	Nishikawa et al.			
	AFFFF	6,072,570	06/06/2000	Chipman et al.			
	AGGGG	6,097,838	08/2000	Klassen et al.			
	AHHHH	6,101,265	08/08/2000	Bacus et al.			
	AIIII	6,117,985	09/12/2000	Thomas et al.			
	AJJJJ	6,122,400	09/2000	Reitmeier			
	AKKKK	6,125,194	09/26/2000	Yeh et al.			
	ALLLL	6,141,602	10/31/2000	Igarashi et al.			
	AMMMM	6,151,535	11/21/2000	Ehlers			
	ANNNN	6,169,816	01/02/2001	Ravkin, Ilya			
	AOOOO	6,215,892	04/10/2001	Douglass et al.			
	APPPP	6,215,894	04/10/2001	Zeleny et al.			
	AQQQQ	6,225,636	05/01/2001	Ginestet, Jacques			
	ARRRR	6,226,392	05/01/2001	Bacus et al.			
	ASSSS	6,226,636	05/01/2001	Abdel-Mottalep et al.			
	ATTTT	6,236,031	05/22/2001	Mitsunori Ueda			
	AUUUU	6,238,892	05/29/2001	Mercken et al.			
	AVVVV	6,259,807	07/10/2001	Ravkin, Ilya			
	AWWWW	6,281,874	08/28/2001	Sivan et al.			
	AXXXX	6,290,907	09/18/2001	Takahasi et al.			
	AYYYY	6,313,452	11/06/2001	Paragano et al.			
	AZZZZ	6,374,989	04/23/2002	Vany Dyke, Jr. et al.			
	AAAAAA	6,418,236	07/09/2002	Ellis et al.			
	ABBBBB	6,466,690	10/15/2002	Bacus et al.			
	ACCCCC	2002/0164810	11/07/2002	Dukor et al.			
	ADDDDD	2002/0067409	06/06/2002	Hararai et al.			

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	AEEEEEE	2003/0124589	07/03/2003	Piper, James R.			
	AFFFFFF	2003/0170703	09/11/2003	Piper et al.			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AGGGGG	0213666	03/11/1987	EPO				
	AHHHHH	0557871	09/01/1993	EPO				
	AIIIII	0713086	05/22/1996	EPO				
	AJJJJJ	3735091	04/28/1998	Germany				
	AKKKKK	3340647	05/23/1985	Germany				
	ALLLLL	92/17848	10/15/1992	WIPO				
	AMMMMM	97/20198	06/05/1997	WIPO				
	ANNNNN	00/49391	08/24/2000	WIPO				
	AOOOOO	01/37206	05/25/2001	WIPO				
	APPPPP	03/014795	02/20/2003	WIPO				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AQQQQQ	Ballard, D.H., et al. "Computer Vision" <i>Prentice-Hall, Inc., Englewood Cliffs, NJ</i> 07632 pp. 65-70 and 149-165 (1982)
	ARRRRR	Bander, N.H., "Monoclonal Antibodies to Renal Cancer Antigens", Vol. 18, Supp. 2, pp. 10-12, 1990. Abstract
	ASSSSS	Duda R.O., et al. "Pattern Classification and Scene Analysis" <i>J. Wiley & Sons, Inc.</i> pp. 228-239 and 276-284 (1973)
	ATTTTT	McKeough et al., "A Low-Cost Automatic Translation and Autofocusing Systems for a Microscope", <i>Measurement Science and Technology, IOP Publishing, Bristol, GB</i> , Vol. 6, NO. 5, pp. 583-587, May 1, 1995
	AUUUUU	Roca et al., "New Autofocusing Algorithm for Cytological Tissue in a Microscopy Environment", <i>Optical Engineering, Soc. Of Photo-Optical Instrumentation Engineers, Bellingham, US</i> , Vol. 37, No. 2, pp. 635-641, February 1, 1998
	AVVVVV	Press, Michael F. et al., "Her-2/ <i>nue</i> Expression in Node-negative Breast Cancer: Direct Tissue Quantitation by Computerized Image Analysis and Association of Overexpression with Increased Risk of Recurrent Disease", <i>Cancer Research</i> 53, 4960-4970, Oct. 1993

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	WWWWW	Diamond, David A. et al., "Computerized Image Analysis of Nuclear Shape as a Prognostic Factor for Prostatic Cancer", The Prostate 3:321-332 (1982)
	AXXXXX	Levine, Gary M. et al., "Quantitative Immunocytochemistry by Digital Image Analysis: Application to Toxicologic Pathology", XICOLOGIC Pathology ISSN:0192-6233, Vol. 15, No. 3, pp. 303-307, 1987
	AYYYYY	Enestrom, Sverker et al., "Quantitative Ultrastructural Immunocytochemistry Using a Computerized Image Analysis System", Stain Technology, Vol. 65, No. 6, pp. 263-278, 1990
	AZZZZZ	John C. Russ, "Image Processing Handbook, 2 nd Edition", Library of Congress Cataloging-in-Publication Data, 1995
	AAAAAAA	ChromaVision, "Products", http://www.chromavision.com/products/index.htm
	ABBBBBB	Pratt, William K., "Digital Image Processing, 2 nd Edition," A Wiley-Interscience Publication, 1991
	ACCCCCC	Castleman, Kenneth R., "Digital Image Processing", Library of Congress Cataloging-in-Publication Data, 1996
	ADDDDDD	Ledley, R.S. et al., "Fundamentals of True-Color Image Processing", IEEE, pp. 791-795, 1990
	AEEEEEE	Mize, R. Ranney et al., "Quantitative immunocytochemistry using an image analyzer. I. Hardware evaluation, image processing, and data analysis", Journal of Neuroscience Methods, 26 (1988) 1-24
	AFFFFFFF	Caulet S. et al., "Comparative Quantitative Study of Ki-67 Antibody Staining in 78 B and T Cell Malignant Lymphoma (ML) Using Two Image Analyser Ssystems", Path. Res. Pract. 188, 490-496 (1992)
	AGGGGGG	Goldschmidt, R.A. et al., "Automated Immunohistochemical Estrogen Receptor Staining and Computerized Image Analysis-Comparison with Biochemical Methods", Supplied by the British Library - "The world's knowledge" www.bl.uk
	AHHHHHH	Gross, Douglas S. et al., "Quantitative Immunocytochemistry of Hypothalamic and Pituitary Hormones: Validation of an Automated, Computerized Image Analysis System", The Journal of Histochemistry and Cytochemistry, Vol. 33, No. 1, pp. 11-20, 1985
	AIIIIII	Maudelonde, T. et al., "Immunostaining of Cathepsin D in Breast Cancer: Quantification by Computerised Image Analysis and Correlation with Cytosolic Assay", Eur J Cancer, Vol. 28A, No. 10, pp. 1686-1691, 1992
	AJJJJJJ	Aziz, Douglas C., "Quantitation of Estrogen and Progesterone Receptors by Immunocytochemical and Image Analyses", Anatomic Pathology, From Cytometrics, Inc., Division of Specialty Laboratories, pp. 105-111, July 1991
	AKKKKKK	Unnerstall, James R. et al., "New Approaches to Quantitative Neuropathology: Multivariate Analysis of Morphologic and Neurochemical Measures", Neurobiology of Aging, Vol. 8, pp. 567-569, Pergamon Journals Ltd., 1987
	ALLLLLL	Schultz, Daniel S., et al., "Comparison of Visual and CAS-200 Quantitation of Immunocytochemical Staining in Breast Carcinoma Samples", Analytical and Quantitative Cytology and Histology, Vol. 14, No. 1, Feb. 1992
	MMMMMMM	Horsfall, D.J. et al., "Immunocytochemical assay for oestrogen receptor in fine needle aspirates of breast cancer by video image analysis", Br. J. Cancer (1989), 59, 129-134
	ANNNNNN	McClelland, Richard A. et al., "Automated Quantitation of Immunocytochemically Localized Estrogen Receptors in Human Breast Cancer", Cancer Research 50, 3545-3550, June 1990

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	A000000	Baddoura, Fady K. et al., "Image Analysis for Quantitation of Estrogen Receptor in Formalin-Fixed Paraffin-Embedded Sections of Breast Carcinoma", Modern Pathology, Vol. 4, No. 1, 1991, pp. 91 – 95
	APPPPPP	Kerns, B.J. et al., "Estrogen receptor status evaluated in formalin-fixed paraffin embedded breast carcinomas determined by automated immunohistochemistry and image analysis", Proceedings of the American Association for Cancer Research, Vol. 35, March 1994

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